Recovery Kernel

IPROTOKOLO YOKUNQULA: OPIOIDS

Ukuhamba kwalo yinto engathintshi abantu. Into elandela iyeyo.

Lo mqolo uqeqeshwe ngokuphathelene nendlela efezekayo okufuneka ivele kulo mqolo, kuba ukuyiqala ngokungaqondakali yeyona nto iye kutshisa impilo: ukuhamba kwama-opioid ngokwakho, kumanye amazwi, akukusilali. Kuyinxalenye yesizathu esingabi sithandekayo kakhulu kulo mqolo wonke, kodwa akusiyona into eya kuphatha ngayo ngokwayo. Into eyayikushisa yinto ekwenzekayo ngemuva — ukubuyela kwendlela yokunika imithi yile ndlela yimzimba onakekele ubuhlobo bakhe lapho le ndlela yayibonakala ingqongile. Oku kwenza into enye eyahlukisa into yonke kulo mqolo, kwaye yikho okuqukumbula ukuba lo lwazi olubanceda ngamaxesha (MAT) lukhona phakeni lokuqala. ngokuba kancinci kunokuba emiqondweni.

Ibhizinisi 0 — Ukunceda Ngokushesha: Funda Okuqala

Ikhonza Lempilo

Ikhonko elingaphezulu-riqha kwisixhobo sokubuyela emntweni weopioid akusiyona ukuhamba kokuphumula (withdrawal). Kuyona indlela yokubuyela ekuqaleni kwesanduku ngemuva kwexesha lokungayisebenzisi. Umntu oqala ukungasebenzisa kwaye emva koko wabuya ekakhawini kwesanduku sakhe sokuqala usiza ngekuzenzakalisa komthwalo wokuba nombala omkhulu, ngenkathi elindele ingxaki yomuntu ongasizange asebenzise iopioids. Lo ngumsebenzi obonakala kakhulu kwokufa okubuhlungu kwe-opioid, kwaye kuphawulwa ngeendlela ezimangalisayo namhlanje ukuba umnqwelo wokuthengiswa ukhathazekile ngokukhulu nge-fentanyl — bona Iboridi 6.

Yela i-112 ngokushesha, kwaye usebenzise iNaloxone ukuba ikufuneka, kubu:

- Ukuhlala kwemoya okuncipha, okuthile, okanye kuphuma
- Iziphu eziluhlaza okanye ezigqitha zemibiqiyo okanye izifingfingo
- Ukungaphakathi okanye ukungakwazi ukugqibela
- Izwi lokugqibela okanye ukukhangaza phakathi kokuhlala umoya

⚠ INGOLINGO

UNaloxone (Narcan) buyika ukungabi nempilo ngokuzinzila kwama-opioid kwaye kukhona ngaphandle kokuthiwa igqirha kumapharisifomu amakwetye kakhulu

eMaUniseni, okanye konke kusebenzisa iingxoxo zokulungisa ubuhlungu. Ukuba likufumaneka — kuwe okanye kumntu onye kwindlu yakho nembali yokuzebenzisa ama-opioid, yonyaka okanye namhlanje — akusona isithunzi sokuziva ukuba uza kufela. Kuyinto efanayo ngokupheleleyo nengqina yokulwa nobunye: into onelindele ukuba unayona kakhulu kwaye uyilungiselele nawo.

SANCTUARY

Izingcwadi zokungaqhubeki ze-opioid ngokwayo — ezichazwa kwIsahluko 2 — zingamandla kwaye ziqhithizayo, kodwa kubantu abaninzi angena emva kweengxaki ezingaphezulu zempilo, azikuyona into enokubomi okungaqhubeki ngokwakunya. Ukuhlala kwemthetho wezempilo ngexesha lokungaqhubeki kukhona ngokwangcoko ukunceda ukuphumula ngokwaneleyo ukuqinisekisa ukuba umntu angayiqhaphanga ekuhlukweni okubonakala ngeendlela ezibonakalayo, hayikho kuba ukungaqhubeki ngokwakunya kudinga ingxoxo yomsebenzi weziko. Ukazi le nto ibonakaliso ayenza into ingalula, kodwa gushintsha ukuba yintoni ekufuneka ukhathazeke ngayo, kunye nini.

Ibhizinisi lesi sifunwa ngalo mmbiso liyayibonakala kakhulu ku-MAT.

Ukutshakaliswa ngopharimanti—buprenorphine, methadone, okanye naltrexone—ngokubanzi kokunika iqiniso elikhulu, yindletha ekhuselekileyo kakhulu evumela ukulawula umbala wokuziphatha kwama-opioid. Lo mqondo utsho ukuba ngokuqondileyo nangaphandle komthwalo wezinto ezithile zokubuyela kuwo lo: MAT akusiyo umlinganiselo omncinci wokubuyela, isitshixo, okanye 'sifumeneleke kancinci.' Yindletha yomedical ekhuseleka impilo enokubonakala ngendawo yokunqanda ukufa eyenza iqiniso elingatholakali kwizinto ezininzi zokuziphatha. Umsebenzi wokubuyela oqhuba ngoqozo kwi-MAT—umsebenzi wezinto zokuzima, womlingo, kunye nomntu kwimbongeko 8 nangama-9—unonxabiso kuwo, akusiyo ukuba... isixhobo esingathatha isacelelo

I-Centurion

Ukuba ubonakala ngumzekelo okanye umntu ukuba i-MAT ikho kuba unye "awusona ubuhle," loo ndlela yokubuka ayilungele yizinto ezibonakalayo kwaye inyusa impilo. Inkhawuleko ekubekweyo kukubonakala ngokupheleleyo ukuphila nokusebenza, hayi ukuba yeyiphi imasimanti ethile ekhona okanye ayikho kwisimembeni somntu.

Ibhizinisi lesi-2 — Ikhawuleza Lokulahlekisa

Ixesha elidlulileyo	Yintoni eyenzekayo	Yintoni ukulindela	Yenza ntoni
Iimora e-6-24 (ukubuka, luhlukahluka	Ukunquka kokubusa kwe-opioid; isisiteme siye ngaphandle	Ubunzima bokuziva, ukunqanda kweminyaka, ukususa,	Ukubandakanyeka kweMAT, ukuba kuqhubekiswa,

Ixesha elidlulileyo	Yintoni eyenzekayo	Yintoni ukulindela	Yenza ntoni
ngokuba yiqela le-opioid)	kwesanduku sakhe esilindelekileyo	ukuhleka, ingwenya ekhanyayo, ubuhlungu bomzimba obubanzi, ukuba nengcindezi yendalo	ngokuvamile kukuqala kulo mqondo—i-buprenorphine ikudinga ukuba umntu ekugqibeleni ekhaya kwalo mophanga ukuya kwemophanga onombala phambi kokuthatha isanduku sesokuqala ukuvikelwa ngokungaqondaka li komophanga onzima.
Izinsuku ezi-1 ku-3 (izimpawu zokwenkolo ezibalulekileyo)	Isizathu sokuba sinxalenye esiqhubileyo; le yinto enzima kakhulu ngokulilwanyeka.	Ukungonothola, ukvumiwa, ukuhlalaza, ukugqibela kwamaqamba, iingca ezikhulu, ukutshintsha phakathi kokuthina nokusuka, ukunene okubi kwayeminyaka neminyaka, ukulala okungaqondi	Ukuphathwa yizinto zokunyanzela komntu okanye ukuba kuphathwa ngemeko (MAT) kunciphisa kakhulu le nto ibonakala. Lo nye yindawo enomkunzi omkhulu kubantu abayiqonda ukuba ubuhlungu babo bungenakubekwa ngaphakathi kwalo, kwaye bayabuyela ukusebenzisa - bonisa Isahluko 0.
Izinsuku e3-10 (ukubuyela kwemzimba emva kwezinto ezibuhlungu, izimpawu zokuziphilisa eziphezulu)	Ukulungiswa kwezinto zokuhamba ngokomzimba; iindlela ze-endorphin ne-dopamine kwiqela lakhe elilinganiswe	Ubunyembezi obukhulu, ukungazibandakanyisi, ubuhlungu bomoya, ingcindezi yokulala ekhona, ukuzifumana okuhlala, iingxaki ezithile zokwenkqubela	Iqela elipheleleyo lezinto zokunika iingcamango liza kuqala (Isiqalo 9). Ivakalisa ngoku kuba nengxaki ngokomzimba, nakuba ingaba yinkqubo emfutshane.

Ixesha elidlulileyo	Yintoni eyenzekayo	Yintoni ukulindela	Yenza ntoni
			Ukunakekela ukulala yinxalenye enamandla kakhulu yokulungiselela ukuvavanya kwesizathu esilukhulu — yenze into ekubalulekileyo ngqo.
Iimazu 1-4	Isimiso esiqhubekayo se-endorphin ne-dopamine; iingqaku ze-opioid ziqala ukunqanda (upregulate)	Ukubandakanya okuhlanzeka kunye nokutshintsha okukhulu ngosuku; iziganeko zamaPAWS zingenzeka; ukuzivakalisa okuphazamisekileyo; ukufuna okungaqhubekanga kodwa okunamandla	Iprokolu elipheleleyo libanye. Ukuxhumana nomphakathi kubalulekile ngaphezu kokuba kubonakala njani —ukuhlala ngokuzimeleko yinto ephambili yokubonisa ukubuyela kwalo mqobo ongaphandle kwale ndlela yokunqoba ethile.
Iimethu 1-6	Ukukhula okubalulekile kwe receptors; iimeko zedopamine kunye neendorphins ziyayiqhuba ukubuyiswa kwazo; ukuhlala kokuphuka okukhululekile (ukuzinzila kwezinto ezibonakalisa ubuhlungu kusuka kumaphakathi omopioids) kuqhubeka nokunqoba	Ukuphavanga okwenziwa ngokwenye into; iimvakalelo zokuziqhuba ezemfundo zakudala zibuyela; ukunqanda umthwalo ukhululeka	Oku kuphi umsebenzi uba nokuziqhelanisa kakhona kunokuba ukuphilisa kuphela. Umsebenzi wekhunya (Ibhiseki 9) uba nokufanelekile apho, awukufanele ngaphambili.
Iimithathu ka-6 kuya kwemithathu	Ukuphuhlisa okukhulu kwe-mu-opioid receptor; isimo se-	Ukujabula okusetyenzeka ngendalo kunye nokuxhumana	Ukubuyela kwesixhobo se-endorphin

Ixesha elidlulileyo	Yintoni eyenzekayo	Yintoni ukulindela	Yenza ntoni
ka-18+	endorphin siqala ukunika ubuhle bomntu kunye nokubandakanya kwabantu.	okufuneka ngaphandle kokungqina kwemithombo yombala; iimvakalelo zamaPAWS zingaba nzima; ukuzifunela kusekho njalo kodwa kuphathelene nendawo	kubantu abaninzi ngeminyaka engama-12 kuya kweye-18 yokuphuhlisa okungaphambile, nakuba loo phuhliso luhlanganisa iMAT okanye akuluhlangani.

Ibhizinisi lesi-3 — Ngemva yimva yikuphi ukuya kuqala ukuba ingqondo iye kwindawo yakhe yokuziva kakuhle?

Ukuthuka kwesanduku se-mu-opioid receptors, kubantu abaninzi, kuthatha iyure ka-12 kuya ka-18 eminingyaka yokuphuhlisa okungaqhithi — isikhathi esiqondileyo nokuqala kwezinye izinto zokulungiswa e ngxenyeni le. Isinduva sokuhamba kwesanduku se-PAWS singakwazi ukunika iyure ka-18 kuya ka-24, kwaye kubuhlaliselo lokulungiswa okubandakanya i-fentanyl ngokukhethekileyo, lo mgwaka ungakwazi ukuba uqhubeke.

Ukuzwakala

Ukuba ukhona iminyaka eyisithathu kwizinto zakho kwaye usaphola nge-PAWS waves — unxaku okukhawuleza, ukuthanda kunokubonakalisa isizathu, umnyango osemnyama wezinsuku — akusiboniso sokuba umsebenzi ukhona. Kuyindlela esiqondile apho i-timeline yabonisa ukuba uyihlala. Iphepha eliphakathi liboniswa ngeyure kakhulu, nokwazi lokoko ngaphambili kuqondishwa ukuguqula ukuba umntwana onzima we-eight ubonakala kanjani, hayikufuneki ukukwenza umntwana onzima uyaphinde.

Ibhizinisi lesi-4 — Into onokuba uyibone kakhulu

- Inanhedonia ekhona ngokukhethekile, yinkulu kakhona phakathi kweziwi elilize — ukutya, umculo, abantu onawalela ukuba banokubonakala bebonakalisa njengezinto ezifutshane kunokuba zithandekayo, kuba iindlela ze-endorphin ne-dopamine ezenziwa yizinto ezibangelwe yi-opioids zihlala kwiqela eliqhelekileyo lezinto zobugqili.
- Ukuzinzila kwezinto zokunyakaza (hyperalgesia elivunywanga yizinto zokunyakaza) — umbono oqinisekileyo, onemvakalelo apho isimo sokunyuka sokuphumula sinaba nzima kakhulu kunazo xa singaphambi kokusebenzisa i-

opioid, njengoko sinayiqala ukuzilungiselela. Oku kuphumela phambili kwixesha elibonwa kwiBanga lesi-2 neBanga lesi-3, kodwa kuyabangela ukungaqondi xa kusenzekayo.

- Ukulala okungaqhelekanga ukubuyiswa kwakho, lalo ndawo elingumthwalo omkhulu kakhulu wokuba kuphumela ukuba kubekeka ubuhlungu bokuzivocela ekuseni — kufanele kuvunyelwe njengoko yonke into eye ngayo le nto yale nkqubo yokubuyela.
- Izinto zokuziva ezikwazi ukufika ngaphandle kokuba kukhona into eyenzelisa ngokubonakalayo, ikakhulukazi phakathi kwezixhobo zePAWS—le yinto yobugqili bomzimba, akusiyo isithunzi sokungafinyeleli kwengqondo.
- Isizathu esibonakalayo sokungaphumanga kwamasiko okanye ukuzisola kubalulekile kakhulu kuwobonisi beG-allele OPRM1 (Ibhiseki 5) — lo receptor onalo ubunye bokulawula umthwalo we-opioid, kodwa unokulawula nakoko ukubandakanya kwamasiko esingqongweni se-endorphin, ngoko ke ukuba kusebuhlungu oko kubonakala njengokungaphumanga ngokwakho, hayi nje ukuzifuna i-'drug'.

Ibhizinisi lesi-5 — Ukubuyekezwa Kwezinto Zokungqondo (Genetic Cross-Reference)

Igezi	Into eyinqabileyo	Ubunyanga bokulungisa i-opioid
OPRM1 (A118G)	Istruktura ye-mu-opioid receptor — ingqiqo yalo mnandi yonke i-opioids ibenzisa	Ingene ebalulekile kakhulu kulo mqondo onke. Abanombala be-G-allele bayinombala eliphukanisiwe lokubambela ireceptor—okuthetha ukuba babonakala nokulungisa umnotho omncinci kunye nokunika imithandazo kusuka kwiindleko zendalo, okuyingxenye yoko eyayidlulisela ukuphavulwa. Lo mbambela eliphukanisiwe linto lithetha ukuba kubonakala nokulungisa umnotho omncinci kunye nokuvela kwizixhobo zokuzibopha ezivela kwiizixhobo zezewu (ukutekela, ukuxhumana, ubuhle), oko kuyinxalenye ekuphathweni kwezinto zakudala zokunika imithandazo kubalo elinombala lalo. Ngaba yinto ekbalulekile: abanombala be-G-allele babonakala nokuzenzela okungaqhonywa ngokusebenza kakhulu ku-naltrexone—le yinkulumo yokuthiwa kwemeko yokuphatha ekhona ngalo, eyayifanele ukuyibizwa

Igezi	Into eyinqabileyo	Ubunyanga bokulungisa i-opioid
		kubuMthombo.
CYP2D6	Ibhubisi i-codeine, i-tramadol, kunye nezinye iimithi zama-opioids ukuze ibe yizinto zakhe ezisebenza okanye ezingasebenzi.	Ababuyeke imetabolizing bayathola umthelela omncinci okanye ongaphelelanga ku-codeine okanye ku-tramadol, okukwenza ukuba kubekwe isixhobo esikhulu ngokuzama uthando oluphumeleleyo oluphakathi kwendawo yokuthi lo liqelelo elithile angekunikezi. Ababuyeke ngokusuka kakhulu bayavumela i-codeine ukuya yaba i-morphine ngekhawuleza okungaqondanga — umsebenzi obonakalayo wokufa nakuba kumasixhobo esiqondelwe ngokubekwa. Kunjalo kubathathwa ukumbala kwe-buprenorphine kwizinto ezibonakalisa kakhulu ekubekeni i-MAT.
CYP3A4	Umphawulisi oyintloko wefentanyl, oxycodone, methadone, ne-buprenorphine	I-gene yomkhuseleko wephakokinamikisi ye-opioids abantu abaninzi ekuphileni kwalo, okubandakanya imithi yama-MAT ephambili. Ukungqibelwa kweCYP3A4 — kuku-genetiki okanye ukuhlangana kwezimithi (iimithi ezithile zokubhokaza, iimithi zokuphepha, nakoko ezingazifumana ngegrapefruit) — kungakwenza ukugqibela okukhawuleza kwalezi zimithi. I-CYP3A4 inducers zingakwenza ukuba kube nokungcoliswa kwe-MAT ngokuyikhipha imithi ngokusityuka. Cofa bonke abayilungele ukunika iimithi zazo zonke izinto.
ABCB1 (i-p-glycoprotein)	Ukuhamba kwezinto zokutshona kwemvakalelo (blood-brain barrier)	Izinye izinto zithinta indlela umopioidi ukhomba ngayo emoyeni (CNS) kusuka kulo mbala othile — ezinye izinto zivumela ukungena okukhulu kwemoyeni, zibangela imiqondiso emkhulu kusuka kumbala ofanayo nezibonakalisa ukukhutshiswa kokuba yindlela yokuziphatha. Zithinta kwaye i-buprenorphine ne-methadone konke ku-CNS, ezibalulekile ekulungiseni kwe-MAT.
DRD2 (Taq1A, A1 allele)	Ukunqanda i-DRD2 receptor density	Ukuncipha kwemihla engama-30% yombala we receptor kwiA1 carriers — Syndrome yokungabi namandla okuzibopha. Ekanyeziwa ne G-allele ye

Igezi	Into eyinqabileyo	Ubunyanga bokulungisa i-opioid
		OPRM1, iyathuthukisa ukungabi namandla okuzibopha okuphambili okuhambela iindlela zokuzibopha ze-opioid kunye neze-dopamine ngexesha elilodwa — eziqalo ezinkulu kakhulu kwimkhawulo onke.
COMT	Ukuhlanyela kweDopamine kunye nokubuyekeza iisimemo zokunyakaza	Kukubalulekile ngokukhethekile kubo bonye umntu owathatha ukusebenzisa i-opioids kwisimembo sokulelwa kwezulu—i-COMT variants zithinta ubunye bokuziva ubuhlungu okungaqondi ngokuphazamiseka kwe-opioid, okuqukumbela ukuba ubuhlungu obunguqalathwa kungafuneka libe nendlela yalo lokuqaliswa (Ibhizinisi 6) nakuba i-opioid dependence ngokwayo isululwe.
MTHFR	Ukubenza i-neurotransmitter	Ukuba kutshintshwa i-dopamine ne-serotonin ekuqaleni ukuba nazo izinto ezifutshane onokuba zayisiza ngayo i-opioids. Ukusekelwa kwe-5-MTHF kubalulekile, akusona okukhethiwe, kulo mqobo.
GABRA2	i-subunit ye-alpha-2 yombala we-GABA-A — iingca zokulawula ngendlela yokuziva	Amanqaku angalona amagene omopioid aphambili, kodwa yindlela yokubangela okungenayo, ngeengca ezimbini: yile ndlela efanayo ye-GABA ekhululekileyo kwiingxaki zokusebenzisa iimopioidi kunye ne-benzodiazepine okanye iimopioidi kunye no-alcohol (yonke into inyathelo kwizixhobo ezahlukeneyo zokuthetha ngenkinga yokuphazamiseka/ukulawula, kwaye yonke into inqanda isifundo esithile sokusebenzisa iintlobo eziqokelekileyo), kwaye inqanda umfanekiso okhangele onokuboniswa ngaphakathi.

Ukuba iCOMT Ishintsha Ukuthi Izinto Zokulungisa Izilwanyana Ziziva Ngakanye

I-COMT igqivela ukuthi izinye izinto zokuziphilisa (dopamine) nezinto zokucindezeleka zingayaphuma kanjani, kwaye le nto yokunika umbala lalo yenza ubuhlobo phakathi kwama-opioids nokuphumelela kwazo umntu othile—akusona kuphela ukuthi ngoba ningazisebenzisa kangakanani, kodwa ngokuba yinto enokuboniswa njengento ekufuneka kwiqala.

COMT Profile	Ikhawuleza Ngaphambi kweOpioids	IziOpioids Ezithile Zelethwa
Val/Val ('Ubhahle') — ukunqanda okukhawuleza, umoya ka-dopamine ophilileyo kancinci	Kwaye kwinxalenye yokuphumula, kulungele ukuzivocelwa ngamandla; luhamba kuqinile nentsingiselo nakuba ngaphandle kwesinto ethile.	Iipopioids zabanikeza umlinganiselo kaubuhlobo obuhlukileyo kunalo lwezinto ezithile ezingathandekayo — akusona "kugqibeleni, kuthula" kodwa ngakumbi "kugqibeleni, kuvele kubekho isiqalo sokuba nokuphumula kwisibindi esizokulungele ukungaphinde siqhube ubuhlobo." Lo mlinganiselo uyahlukileyo kancinci kakhulu kumthwalo weopioid kunalo lomthwalo westimulant, kodwa xa ukhona, ukubuyela kubekwa kwizinto ezintle zokuziphilisa ezinombala omkhulu, hayi nje umsebenzi ohlala kuphumula.
Met/Met ('Umkhathisi' / 'Umfundisi') — ukuhlala kancinci kwesixoba, umbala omkhulu wezinto zokuzima ngokubanzi	Kunjalo kukhawuleza ukuba lulungele umoya onxanima okanye olubekwe ngaphezu kwakho lapho libehlekile; isimo somzimba sinobuhlobo bokuba sibonakalisa ngokungavumanga ngaphambi kokuba kuze kube nokusetyenziswa kombala.	Oku ngumbonakaliso olubanzi lokuphuhlisa iopioids. Ukugcinwa kweHPA-axis yamaopioids (iibhodi zokungqondo zeSection 5) luyabonisa ngokuthetheka isisombululo esiqhubekayo sekhono lokuziphilisa—ukuthula akusiyona nje ukuhlanzeka komzimba, kodwa yilo naqala ilizwi elingaqhithiyo lezinto ezifana nokuphumula ngokupheleleyo. Lo nguye namhlanje umbonakaliso apho ukuphuma kweHPA-axis okuchazwe kulo hhayi kwile nkqubo yalo lo mbhalo lihlaba, kuba kukhona isenzo esiningi sekhono lokuziphilisa esingalibanga ukuba libe ngamandla.
I-heterozygous (Val/Met)	Isiqalo esingaphakathi phakathi kwezi sifile ezimbini apho.	Kwaye ngamanye angekoyiko—njengokufuna ukulungisa umzimba okanye njengokufuna ukulungisa isixhobo sokuba namahlazo—ngaphandle kokuba konke kusekhaya kwemvakalelo njengeeyona i-homozygous profiles.

I-GABRA2 kunye ne "Nqubo yokulungiselela i-Depress"

Okukhona ukubizwa ngqo kunokuba kuhlala njengefuniko elincinci kwitablile endaphomu. I-Gene-Substance Matrix yeCompendium yakho ybonisa i-profile esithile sebandakanyisiwe — GABRA2 ekhunkathweni kwi-risko kanye ne-COMT Met/Met — njenge-'Anxious Depressant Pattern,' ekubandakanyekayo kwama-alcohol, benzodiazepines, kunye ne-opioids: amandla okuzilapha ahlulekile (COMT) aphethwe kwi-tone yokulawula ehlulekile (GABRA2), enzele ukukhula

okungaqhuba okubonakalayo kwendlela yokuphumelela kwalo lonke i-profile kuloo matrix.

⚠ INGOLINGO

Ukuba lo mbusto kuwe, izinto ezimbini zibalulekile ukuzazi ngobubonakalayo. Okokuqala, yingxenye yoko kuthi ukusetyenziswa kwezinto eziningi — i-opioids kwi-benzodiazepine okanye i-alcohol — yiqhuba elinombala kwisifulo esithile: i-opioid inika umthwalo we-stress-system kunye nokulungisa ubuhlungu, ngelixa into ekhangela i-GABA inika umthwalo wesixhobo se-brakes esingaphumeleli, kwaye akona nazo zinto ezimbini zingabonisa ngokupheleleyo lokho elikwenziwa yona. Okwesibili, oko kuthetha ukuba impilo yalo mqondo indinga ukubhekiswa kwemixholo emibili nganye — umsebenzi okhangela i-opioid kulo mdululelo, kunye nomsebenzi okhangela i-GABA kwi-guides ye-Benzodiazepine okanye i-Alcohol ye-Recovery Kernel ukuba into eyona yinto. nakuye kwaba yingxelo—ukuphatha indlela yokugqibela i-opioid njengombala olandelayo.

Ukubonisa ibhizinisi ngaphandle kwezixutsho

- Ukuba i-opioids zikunika ukulungisa umbala okanye akukho nto inokwenza, nakuba kwi-doses abanye bayibona ngokwaneleyo? → I-G-allele ye-OPRM1 okanye isizathu se-ABCB1. Ukuhlola i-CYP2D6 kuyinto ebalulekileyo ukuyiqalo.
- Ingxaki yamaopioids ikwenza ukuba uqaphele, ukhuseleke, kwaye ungenalo nto ingakubonakalisiwe ngayo? → Ukubandakanyeka okukhulu kwe-OPRM1 kunye nokungaqondakali kokungabi khona kwesistimu ye-endorphin. Umsebenzi wokubandakanya abantu (Ibhizinisi 9) yinto ebalulekile, akusiyo into encinci, kubuhloko bakho.
- Ukuqala kwakho kwaba ngekophi phukumiselo eliqinile? → Izi-variants se-COMT zokuziva iphukumiselo zingaba zibalulekile. Uphukumiselo ongangathathwa kwayo kufuneka kube nendlela yalo yokutshatshana — bona Isahluko 6.
- Ingaba yinto yokungena kwesanduku okanye ingqondo yokuba ngumntu onombala, into yakho ekunikezayo njalo, engayifaniyo nokusetyenziswa kwe-opioid? → Ngamanye amathuba ukuba yi-DRD2 deficit kunye ne-MTHFR involvement. Ukusekelwa kwe-dopamine yinto ebalulekile kakhulu.

Ibhizinisi lesi-6 — Izinqelwane Eziqhelekileyo

Isimo	Yintoni eyenza ukuba yahlukile?
Ubutshongo obuqhubekayo njengeqala	Kubantu eliningi elkhululekile kwi-opioid, umnotho onembala yomzimba wawuyisizathu esingaphakathi kwesihloko sokuqala futhi usubekeka njalo. Ukuziva ukuba khona ubuhlungu obungaqondakali okusuthumulwa yinto engabonakala, kodwa ukukwazi ukuthi umnotho onembala yomzimba wawuyisizathu esingaphakathi kwesihloko sokuqala, futhi akuzange ukhona xa i-opioid isiza. Lo

Isimo	Yintoni eyenza ukuba yahlukile?
	mntwana udinga indlela yokunakekela ubuhlungu eyaqhuba ngokubambana neendlela zokulungisa - umsebenzi wephysical therapy, ukunakekela ubuhlungu okungaphezu kwe-opioid, kwaye ngamanye ama-case i-buprenorphine elisetyenziswa ngokukhethekile kubuhlungu (into eyingqaka, eyahlukile malunga nendima yakalo kwimandla yokulawula ukuzinzila) ngaphandle kokuba kuphawulwa neendlela zokulungisa. Ubuhlungu obungaphawulwa bubuqunqo beziinto ezininzi. izindlela ezibonakalayo zokubuyela ekintweni yobulawulo bokuphepha kwalo ngalo mqondo onye kulo mqolo.
Ikhambi elilungele ngamafentiyl	Ukunika i-opioid elingalungile kwi-suku, kunye nokuphambili kwama-stimulant elingalungile kunye neyokuba yizinto ezifana nemithi yokutshisa, liqhubekela ukungcwele ngomfuta, okungaphezu kweheroin kunye ne-opioids zokuphendula. Umntu onenkinga ekhona ngokusebenzisa iheroin okanye imithi akaboniswa ubunye obuqinile kubuhlungu be-fentanyl elingcwele — ukuhlukana kwe-potency kungaba yinto ekubomiyo kakhulu kwisixhobo esingabonakali ngokuqala nalo umthombo abawumisele. I-fentanyl test strips (ezifumaneka kuqoqosho elinye leziko lwezinto zokulungisa) kunye nokufika kwe-naloxone akusiyona iqinisekiso elingalungile kubo nganye onse umsebenzisi we-opioid — yizinto zokuphepha ezibalulekileyo, isiqalo esifanayo njengokuqala kweSection 0 yokulungisa i-fire-extinguisher.
Indlela yokutshisa (IV)/yokungena ngombala	Ikhawuleza iingxaki ezithile eziqondishwe kwiqhuba lweRecovery Kernel elithi Ears, Eyes, and Teeth — ukugena kwezifo kwinda ndawo yokutshisa, endocarditis, hepatitis C ne-B, kunye ne-HIV. Ukuhlola iingxaki ezizivela emlindweni yizinto zokunyanzelwa kwemthetho weziqalo zokulapha, akukona ukubulela — kwaye ukutshakalisa kwehepatitis C namhlanje kuyasiza ngokupheleleyo kubantu abaninzi, nangona ingxaki ibe yimva kwixesha elide.

Ibhodi lezixhobo kunye neziphukileyo

Kubantu ondiqala ukunxiba i-opioid yomthetho ngokukhethekile, inyuka elihlala liyenza kube nombala ohlukile umthwalo wokuziqhelanisa. Lo ngumbono omkhulu wezinto, akusiyo isikhangiso sokungqondweni sombala — i sifundo esiqondile sidinga ubuqhawe obazi umntu othize, indlela yakhe yanamhlanje, kunye nendlela yokuziphatha. Okulandelela luyindlela ebalulekile yokuyibeka kulo mbuzo.

Isixhobo	Yintoni eyenza ukuba kube nzima ukuyaphinda (taper)?	Indlela Eqhelekileyo
I-fentanyl (i-patch okanye iyona enobumba)	Ukuba namandla amakhulu kusho ukuba nakuba kuncipha okuncinci elingumsebenzi wokungena kwamanzi, kuwakubonakala njengezinto ezinkulu ngokwezinto eziphambili; umbinde elivela emzimbeni liza kancinci	Iimvakalelo zokulungisa iiphatch zingahamba kwiingxaki ezilungeleyo ezeziqhubekayo kwixesha elide (ngamanye amaxesha iimazu-2 ku-4, zilandela umgaqo wokuba ngoko kepha onke umbhalo), ngezinye izizathu zingaboniswa ngokutshintsha

Isixhobo	Yintoni eyenza ukuba kube nzima ukuyaphinda (taper)?	Indlela Eqhelekileyo
	(ukuqala kwezinto zokugqibela, isimo sebhokisi, kunye nokufaka ibindi konke zizilawula ukutlawulwa) kwenza kube nzima lokuba kuphawulwe kuphela ngomsebenzi we-pharmacology ngokwakhe.	okukhulu phakathi kweziqhubekayo zeiphatch. Ukulungisa i-fentanyl elingalungileyo kungenziwa njengokuhamba kwesiphatch ku-siphatch — ngokuvamile kufuneka kutshintshwe kube yinto ebonakalayo, eyakwenziwa ngolwandle (bona MAT, Iboridi 8).
I-oxycodone ER (OxyContin) kunye nezinye i-opioids ezivulwa ngemvakalelo kwi-oral	Ikhakhulwa lokunika iqinisekiso elide lisho ukuba ukuguquka kwecala ku yenza kube nokutshintsha kwemeko ephakeme kunye nendlela yokugcina umsebenzi — isiqalo esibonakala sokuphawula kwipapirika singakwazi ukunza indlela yokungena okunzulu.	Ukunciphisa okuhle kwemvakalelo yombala okhululekileyo, ngokucacisiwe ukuba 10-25% njalo ngamaaa-4 ngeeweekanti ezithile kuye ngokuba ntoni umsebenzi nokunqanda, ngamanye amazini kuphawulwa iforma elihamba kancinci lokuzenza izimpawu zokungaqondi phakathi kwesitshalo — isinqumo somnyango wezokuphepha komthetho, akusiyo ukuzixhaphaza.
Hydromorphone (Dilaudid)	Ukuba nophakama oluncinci kwaye nokuphakama okukhulu kumorfine kusho ukuba intsha yoyenza iqala ngokushesha kwaye ingaphezulu kunalokungena kwemifanekiso ephilayo, efana nemfanekiso yengxaki yombala omncinci okhona kubuchwepheshe be-venlafaxine kwiqhuba le-SSRI/SNRI.	Kunjalo kwinxaxeko (kuyawubekwa) ku-opioid elinokuziva kwixesha elide kuqala ngokukhethekile ukuqinisekisa ukuba umntu okhululekayo ube yinto elilungeleyo, kunokuba kufuneka kukhululelwe ngendlela enonxaxeko. Lo mshintsho uyindlela yokliniki ekhethiweyo, akusiyo indlela yokuziqhelanisa, kwaye kufuneka kuqondishwe yabalelingisi ngokubhekiselele iingcamango zokuba nengamandla eziyifakwe.
Tapentadol (Nucynta)	Indlela kaqinile kakuhle ehlukile kwiingxelo ezizayo kulo mbhalo —umsebenzi wezinto ezimbini njengokuba yimthombo we-mu-opioid agonist kunye nokuba yinkukutshiselo ye norepinephrine. Lo mbhalo wesibili kusho ukuba abantu baanye baziqhubeka naye kakuhle ngoba izizathu zingaphezu kokuba nekhono lokuziva kwe-opioid receptor: umsebenzi wezinto ezithile ze norepinephrine unokwenza	Ukuba i-tapentadol ingathandwa, oko kubonakalisa ulwazi olubalulekile kumntokelisi — kungaba lixelela ku-dual mechanism kunokuba ukunika imiqondo yama-opioid ngokwayo njengombuso wombala, kwaye kuyaqondela kwikhezi elithile lokutshona kunokuba nje isanduku esitsika sokuqala.

Isixhobo	Yintoni eyenza ukuba kube nzima ukuyaphinda (taper)?	Indlela Eqhelekileyo
	ukukhathazeka, ukutshisa, okanye ukunqanda kwemoto yengqondo, ikakhulukazi kubo bonye abantu abangaphambi kokuba benze isimo esikhulu (i-COMT Met/Met profile kwiMbhalo yeSection 5 inokubhekiswa lapha ngokukhethekile).	

Ibhizinisi bePharma ebonakalisa iGaba-pentin nePregabalin njengeyona nto iyaqhubeka nendawethu yombala weOpioids

Izinye izindlela zokunika imithi eziqhubekayo ezifanele ukuthola umthwalo othethelweni njengoko le library inikela kuyo kwindawo enye: i-gabapentin ne-pregabalin zinganinzi zinikwa ngokukhethekile ukuvimbela ukunika imithi yamaopioid, okanye ukuqinisekisa umsebenzi wekuphumula kwe-opioid ngokubamba ingxaki yomzimba. Oku kungaba yinto eyingqingo, enokufuneka. Kungaba namandla kawoyo akuziqondi, okuqukile kwemithi ukuba akukho umntu onokuqinisekisa umhla wokuhamba.

⚠ INGOLINGO

Ikhakhadlo likaRecovery Kernel ngemakhulu omga gabapentinoids lihlala libonakala lapha: lezi zibonakalisa ngokwezinto ukuba zinemixholo yokuphazamiseka nokungaphumeleli kwazo, okubandakanya ingonyama yokugcina emiqondweni ekunziwe, nakuba zayisetyenziswa ngomnye umsebenzi njengokuba akuzona into ekhathalayo. Ukuba igabapentin okanye ipregabalin yanisetyenziswa njengezinto ezifana ne-opioid, imibuzo mifanayo yokubekwa kwilebhorethi leSection yezi sifundo zizibonakalisa: yintoni isikhathi esingcishwa sokuhamba okanye ixesha lokubuyela kuwo, ingaba yindawo yokutshintsha elinokuzayo okanye ukunikezwa ngaphakathi kwexesha elingalifani, kwaye yintoni indlela yokulungisa into enye leli phophu ukuba kufuneka iqale. Iphophu elangayiqhuba ingxaki eyodwa ukuhamba kwixabiso akusiyona ukuba kulungeleko lokugxila ngokuziqinisa.

Ukunqanda Isizathu Esingaphantsi, Alikona Kuphepha Phezulu Kuphepha

Ngokubanzi kwabantu kuMgwumbi 6 abasemva kokusebenzisa iopioids ekuqaleni ngokuhambelana necala eliqinile, ukunqanda (taper) ekuzungezweni kubalulekile kodwa kungenukuphelele — ngokweMgwumbi 1 kunye noMgwumbi 6 okubonisa, ubuhlungu obungcwatywa yinto ephambili kwaye inokubonakala kwalo ukubuyela ekusebenziseni iopioids kuwo lonke lwesiqhunto. Ukulungisa ukuba yeyiphi ubuhlungu ngempela, nokulihlaziya ngokwenene, akusona into ebonakalayo yokuziqhelanisa okuhle. Kuyingxenye elifuneka kubekwe ukuze kunqandwe (taper) kuqhube.

- Ukuhlola iqela elingumthwalo—ukuchanekiswa kwizithombe, ukuhlaliswa kwesakhiwo, okanye isinyathelo sokuchanekisa esingenzekanga—okanye ukuba kuqhubeka nokunyusa nje ingxaki ngaphakathi kwezinto.
- Ithando lezinto zokulungisa imzimba kunye nokulawula umhlaba wokulwa ngokusebenzisa iimithi ezingaqondi (non-opioid)yo, eliqondishwa yindlwane yokulwa malunga nomntu onokuqala ukuyisiya iimithi.
- Ithando le-ketamine infusions — ingxoxo eqinileyo, isixhobo esiqondileyo kubuhlungu obungaphezu kwendlela (complex regional pain syndrome, fibromyalgia, kunye nezinye iindlela zobuhlungu be-neuropathic), elinikwa njengophuhliso olulungele ukuba lihlale kwiindawo ezibonakalayo zokliniki, lihlukileyo kwinkulumo yokunqanda ukuphumula ekuqaleni kweketamine kulo mqondo. Kufanele likhathaliswe ngqo kubahlali abakhubazwa ngobuhlungu ukuba iindlela zakho zokulungisa zingaqhubekanga.

SANCTUARY

Ukuba akakukho umntu owaye enze ukuchazwa kwempilo yalo nobunye—kuphezu kokuyenza nje ukuba ikhona—ukuqonda oku kukuphawula kumnyango wesiqalo. Ukunxiba imithi ezingaqondiyo ezaziqinisekisa into engayikwazi ukuyaziwa, ngaphandle kokuziqonda ntoni into enokuba yona, kukuhlela okufanayo okuqondishwa ngale ndlela yokulungeleka.

Ibhizinisi lesi-7 — Sebenzisa Ukubala Kwemeko

Icala	Ulwazi	Ingxaki	Isiqalo sokuba namandla
Iswakisiwe, esifutshane, akukho ukuphambuka	Isiqalo esingaqondile esisetyenziswa ngokulandelela umyalelo, kubuhlandu obuncinci	Izingeni elilinganile, kodwa angalona noluhle—ukuba namandla ngomzimba kungakwenzeka phakathi kweeweekile ezithathu ukuya kwezimbini zamafutshane zokusebenzisa ngokuziko ngisho nangaphandle kokusetyenziswa okungaqondakali	Iqela elilungeleyo lokuphumula nengqaphela yomthetho wokutshukumisa, kunokuba kuphuma ngokukhawuleza, siye siza kuba yinto ephepha kakhulu nakuba kulokhu kulo cala.
2 — Izibhalwe, ziqhubekayo, okanye	Ukusetyenziswa kwexesha elizayo kancinci kunokuba lisekho emva kwesixhobo	Ikhuseleko elikhulu — ukuba khona ubuhlobo	Ikhona ukubaluleka ukuba nokuphathwa okubonakalayo;

Icala	Ulwazi	Ingxaki	Isiqalo sokuba namandla
ukunqanda okucocekileyo	esisikhethiwe, okanye ukunandisa i-dose ngokutsha ukuze kuqinisekiswe umsebenzi omuhle	bokuziqinisa (physical dependence) kakhulu.	ukungaqhubeki ngokukhawuleza kuguqulisa iingxaki ezinkulu zokuhamba kwemvakalelo, kwaye oku yile ndawathu lapho ingxoxo malunga ne-MAT, ngisho kunye nokuphathwa okufutshane, inamandla okuba isetyenziswe ngokuzibandakanya.
3 — Ukusetyenziswa okungqondisha kwizinto ezingaphezu kwezixhobo zokuphendula okanye ukusetyenziswa okukhulu kakhulu	Ukusetyenziswa okungaphezu kwoko kuncinci okuchazweyo, ukusetyenziswa komntu onye umthombo wezi-medication, okanye ukusetyenziswa okuqhubekayo kwezinto ezingemthethweni ngaphandle kokunika i-dosing elivelelwe njalo kwixesha lonke	Iqoqo	Ukunxulumene nomntu wehlalwa kuncinci kwisizathu sokuba nalo umbono wokuba kufuneka kuphathelwe ngokuqala. UMTH (MAT) kufuneka kube yingxenye eqinile yale ndalo, hayikona nje ukuba kubekwe njengomthwalo omkhulu.
4 — Eliqithiyo, ukusetyenziswa kwimihla ngemihla kuquka ukuvikelwa kwezinto zokuhamba (withdrawal)	Ukusetyenziswa kwimihla noma kwiintsuku ezininzi, okubandakanya ukusetyenziswa ngokukhethekile ukuvimbela iingxaki zokuhamba kunokuba kubonakaliseke ngamandla	Kunzima — lo mqondo uqala kuphawula i-MAT ne-detox yeSection 8 yiqhuba yalo.	Ungazama ukuyeka ngaphandle kokuncediswa. Umgaqo wekhutshisela-ukuhlupheka kaSection 0 ubandakanya ngokugqithisayo kule ndawathu ngokukhethekile.

Ibhiseke 8 — Ukunyamalwa KwiThethimende Yophiliso Nokuphumula

Ingxoxo yomedikayisa	Iindlela	IziNkotshi Zobugqapheliselа
I-buprenorphine (Suboxone, Subutex, Sublocade)	Iphagoni elinokuqala kwama-opioid — lichaphula ireceptor ngokwaneleyo ukuvimbela ukuhlupheka nokuphumulwa, neyona nto ibonisa umkhawulo	Kufuneka umntu akulungele ukuba emva kwesithunzi esincinci ukuya kwinzima (ukuvikelwa kwe-withdrawal). Kungathathelwa kwindawo yomsebenzi yiqela

Ingxoxo yomedikayisa	Iindlela	IziNkotshi Zobugqapheliselа
	wokuba kukhona isimo esingaphezu kwezinto ezithile (ceiling effect) elilimele ingxenye yombala kwimbono yokungaphakathi kunye neeyona zokuziphatha ngokupheleleyo.	elinokuziqeqesha, okubandakanya ngokukhethekile ukufikelela kumahluko apho kuqhathaniswa neendlela zika-methadone ezisekho kwikliniki.
Methadone	Iphakathi eliphezulu le-opioid eliqhubekayo, elidluliselwe—lisiza ukunqanda umsebenzi we receptors ngaphandle kwezibhakabhaka kunye nezizathu zama-opioids ezifutshane	Kufuneka kuphawulwe ngeendlela zethu zokuphila kwimihla eminingi kwiqhuba elilungelelo lokutshukumisa iopioid, ngakumbi ekubeni kwokuqala. Ikhuseleko eliqinile lisekho, ngokukhethu kubo bonke abanombala okungaphezulu okanye ukuba kunemeko olude. Isimo se-CYP3A4 (Iboruko 5) sinetilinganiso lempawu.
Iinaltrexone (yokutya okanye iVivitrol elilanda)	Ikhanganisi le-opioid receptor —lisibeka i-receptor ngokupheleleyo kunokuba liqhubise, likhiqiza into engayindalo yama-opioid kwaye lisibeka umthelela wokuba nawo ama-opioid akathile aqhubekayo	Kufuneka kuphawulwe ngokupheleleyo ukuzisola (ngokubanzi i-7-10 imihla ngaphandle komopioidhi) ngaphambi kokuba kutshintshwe, kuba luza kubangela ukuhamba okubi kakhulu ukuba i-opioids ezintle kancinci eyo sinemvakalelo. Abathwali be-OPRM1 G-allele (Ibhizinisi 5) bubonisa impendulo enamandla kakhulu — ulwazi lwezixhobo lokutshukumisa, elisebenza ngempela.

I-Centurion

Ukukhetha iMAT yindleko enkulu yesikliniki ekhusela ngqo kubuchwepheshe bokungqondo kuloBhizathu 5 — ibizwa kumntu onokuphatha oku kuwe.

Ibhizinisi lesi-9 — IProtokoli Yokubuyela Kufakileyo

Iqela elingu-1 — Isiseko Somzimba (Kusukela Usuku Lokokuqala)

Ukusekhixa	Indima
DLPA (DL-Phenylalanine)	Ukusekelwa kwemvakalelo yendorfini—qala Usuku lwolu 1 ukuba unadla.
NAC (600mg kwii-mini)	Ibalaka le-glutamate kunye nokunqanda ukuzifumana.

Ukusekhixa	Indima
5-MTHF	Ukusebenza kwesithuthukiswa kwe-methylation kunye nokutshintsha kwe-neurotransmitter.
I-glycinate yeMagnesium	Ukusekhona kwesibindi esigqithisayo kunye nokulala.
Omega-3 (EPA-yinkqubo)	Ukusekelwa kwesiko elihlanzekileyo kwezanyalo phakathi kwexesha lokubuyiswa okukhulu kwesixhobo.

Iingcamango ezi-2 — Ubumzimba

- Ka-Section 8, njengophuhliso lokuqala ololwimi lwempilo, kwaye akusiyo umthombo olandelayo.
- Iqela lokulawula ubuhlungu (Isiqalo 6) libanda ngendlela lapho kubekho ubuhlungu obuqhubekayo — oku akusona ukuzibeka kwisiphiyo kuloo ndawathu.
- Uvavanyo nokuqinisekisa ukushilo kwe-Bloodborne kunye nokunqubuka xa kukhona umlando wokusebenzisa i-injection (Ibhiseki 6).

Ithulwa Elula Lisebenza: Ukunika Izinto Ngexesha Eliqikelele

Kufanele kuqondishwe ngokuba yinto engabonakali kakhulu kuba ingaphezulu kwemali, into enokusebenza ngempela, kwaye ingazifihlwa kangaka kwiimfundiso zokuphuhlisa: iingqungqutsho zamafuta anesixhobo esiqinile (time-locked medication safes) xahluka ngokukhezi kwizimo ezifana nokuba nendlela yokunxiba (taper), apho injongo kukubona ukufika okwakwenziwe, okuhlekelwe ngexesha kunokuba yindlela yokuziqeqesha ngokupheleleyo okanye akukho ukuphawulwa kwakona. Umntu onokuzikela — umbonisi, mntwana kaqoqo, okanye umngani okhuseleko — uyeletha iimvakalelo ngokulandelela isikhangiso esenziwe kunye nomnyango weziqalo zamafuta, kwaye isixhobo singazifaki ngendlela yokuzibuka xa kufika ixesha eliqondishwe, nakuba umntu onthatha imfuno enjani kwalo mzuzu. Oku kuqhuba inye indlela yokuphawula ukufikelela kunye nengxaki ebonakala kwingxelo elinye Ukungaphakathi kwesizathu sokuphumelela kweli libirari: ukususa amandla okwenza into ngumthwalo wokuzibona ukuze uthathwe umbala oqala okanye omnye yinto, lona ngokwakhe luphawu lokusekelwa olubuhle, alikona nje lolungazibonakalisi.

⚠ INGOLINGO

Ziqhubekayo izimbanekiso ziqeqeshwe, kwaye zibalulekile: oku yinto yokusiza, akusiyo isixhobo esingathatha indawo yesicelo seplanu sokulungiselela komthetho, kwaye akusiyo isixhobo esingathatha indawo ye-MAT okanye ukuhlola kwadokotela apho kubonakala. Kufuna umbonisi onobutekombe ngempela, okhona njalo — lo xhobo aksebenzi ukuba umntu owawukulawula akazange abe yinto ebonakalayo, kwaye kungaba yindawo yokungena komlungiselo okanye ubuhlungu ukuba kuqhubekiswa ngaphandle kokuthetha ngokungenakwenzeka malunga nokuthi kungani. Akunqoba umntu lokufumana imithi okanye izinto ngaphandle kwesixhobo esiqalo, ngoko lisusiza inxalenye ethile yombuso (ukubuyisa okuphazamisekile komthetho wokulungiselela)

kunokuba liyayilawula. Ikhombisa umfanekiso ophilileyo. Iinqaku ezininzi zinemilo yokulungiselela emva kwenkinga (emergency override) — yazi ukuba yeyiphi kwaye ngubani onamandla kuwo ngaphambi kokuziqokelela kwiqalelo. Kwaye akufanele kube yinto nje yokuteliswa komthetho wokulwa kwezinto kubo bonke abantu abasemgeveni elingaphezulu kwizibalo kwiFundu 7 — yindlela yokusekelwa ekwenzeni emva kwemthombo weziqalo, hayikona ukuguqula umhlawumango.

Ngemicimbi Yizinto Ezivela KwiNqaku: Ukuba "Kufanele Kuphelele Kuze Kuphumelele Icala" Kuyona Yona UkuKhangeleka

Oku kufanele kubonwe ngokucacileyo, ngokuqondileyo, kanti akukho nje ukuthetha ngakumbi, kuba ingozi iyingqina kakhulu kunye nento enye kulo mqondo. Ingxoxo yopharmanethi esivela kwapharmasitiki elinokugqibela inemkhawulo obonakalayo wokunika umthwalo — isekelwe kumahluko anokulawulwa, eyavunywanga kwiqalelo kunye nokuqhuba, eyatholakala ngazo zonke izinto ukusuka ekwenzeni ukuya kwisixhobo esingeniwe. Isinto esithathwa ngaphandle kwalo mqondo asinezinto eziwo. Akukho isanduku, akukho isitifiketi sokungqondweni, akukho ukunikezwa okuzenzekayo ukuba yintoni engenikwe, akukho indlela yokwazi ukuba yidlalile kanjani okanye yayifunyaniswa ntoni ngaphambi kokufika kubantu abayithatha. Le nto ayona Uqondisi olumhlophe malunga nokukhetha ukulifuna—kubuhlakani bomzimba malunga nengxenye ngokwayo eyathatha umsebenzi, oku kubalulekile nakuba ngubani okuyinto yokufuneka.

Ikhonza Lempilo

Okuya kuba yinto engabonakaliyo risiki. Ngokuqhakanyiswa 6, umophaco we-opioid okhona ngoku—futhi ngokwezinto ezifana neyona nto ibonakalayo kwaye ingaboniswa ngeendlela zokutshatsha okanye ukubona—luyathambelwa ngomfuta, onamandla kakhulu kuwo malunga nento enokubeka umntu ekufa ngalo ngokwezinto ezifana nokuba yinto engabonakaliyo, ingaboniswayo ngeendlela zokutshatsha okanye ukubonakala. Umuntu ophakamisa phakathi kwesixhobo sokulungiselela imeko, okanye onolwazi lokuthwala iingxaki zokuzisola ngaphandle kwezixhobo zezempilo, ngokusebenzisa into ethile ekufuneka kwiindawo ezimnyama okanye kusuka kwindaqanga elingabonakaliyo, akwenzanga isizathu esifanayo nesokuqhubela umthetho wemedicines okhuseleko. Kuyisizathu esenziwe nakwi-ingxoxo ngobungazi bokuba yintsingiselo engabonakali. Ii-fentanyl test strips kunye ne-naloxone (Ibhizinisi 0, Ibhizinisi 6) kunceda kodwa akukuyilanga loo nto—indlela yokulungelela ngokupheleleyo kukungsebenzisi iingcinga ezingabonakali, into eyenza ukuba yinxalenye yokuqala ukuba kukhona imindlela yeziqalo zomedikayithi ne-MAT (Medication-Assisted Treatment) kwIbhizinisi 8 njengesitshixo esilungeleyo ngokuhamba ngendlela yokulungisa, nangona loo ndlela ingaba nzima ukufikezela.

Iqela elithathu — Isitemap seengqondo kunye neNdikazi yeeNdofili (Imihla ngeminyaka engama-1-12, iqela lokuqhubekayo)

- Ukuzivocavoca kwemihla okukhulu—indlela ephambili yokuthuthukisa i-endorphin ingabonakala ngaphandle komthelela, kunye nokuqondiswa okungaqhaphakanga kulo lonke isahluko salesi sikhanganisela.
- Umphakathi nomoya onemfundisi—awukuyinto ekhona nje, kodwa into eliqinileyo, ngokuba isisindo sokugqibela i-opioid receptor system siqhuba ngayo ukubandakanya kwabantu (Ibhiseki 5).
- Ukubonakala kwembala, ubuhle, kunye nomculo—yonke inemiphumo yokuvusa i-endorphins ekwenzeniwa ngempela, nakuba ingamafutshane, eziyenzeka ukuzibamba ndawonye.

SANCTUARY

Ibhizinisi le-endorphin liqala ukubunzi ngokuziqhelanisa kwalo lonke ilanga ngeminyaka, hayona ngezingxoxo zokuzenzela. Oku akuyona ingxelo kubo nganye ababhekana nokuba nengxaki yokulondoloza — yindlela enobungane yokuqala ukuthi le ndlela yokubuyela iye kufunayo, egcwele ngokuhambelana nezixhobo zokwenziwa kwalo eliqondile kulo Mbethu 3.

Ishayotisin kunye nokulungiswa kweHPA-Axis

Lo ndelo iqhubekayo kuba incwadi yakho enkulu inika umfundisi onke kwalo, kwaye yakhangele indawo yakhe enye lapha ngaphakathi okanye ukuba ingaliboniswa. Imekanizhi eyenza into le iyimthetho wenyakethe kwaye isetyenziswa ngegama ezinye apho kuqoqo loku: i-opioids ziyilanda i-HPA axis njengoko zisebenziswa, kwaye xa zisusulwa, loo sistema elilandwe alibuyeli ngokuthambile kwisimo esiqalo — libuya ngamandla, lihlala liphambili. I-cortisol liqhubeka, i-amygdala ilima njengoko iyakhanyisa, kwaye isimo sezinto sithi lisetyenziswa ngenxa yesinyathelo esingabonakali. Lo ngubane wezinto zokuziphatha okuze kube nokuba ukususa i-opioids kunokwenza umntu akuzizwa njengokufa nakoko Xa akukho nto ibuhlungu kwiphakathi kwemthetho (Ibhiseki 0) — umphefumlo onokuziva luyingxelo ekwenziwe ngumzekelo wezinto ezininzi zokuzima kwe-stress, hayi ingxelo engalunganga.

⚠ INGOLINGO

Lo Oxytocin yiya kuba ngumkhulumi oqhubeka nokuphambisa i-cortisol-releasing cascade — uyilimaza i-HPA axis, esebenza njengomkhulumi kaqiniso wokuzisola kwesixhobo sokugcola esabekwe yizinto zokuphepha. Iingcamango zakho zizibonakalisa ngokucacileyo kwaye zingayifakakaliswa ngolwazi olufanayo: le ndlela iye yindlela yokuziqonda, ayikuyona eyathathwa yi-FDA ukulelwa kwempilo yokuphambuka, kwaye isetyenziswa namhla kuphela yizikliniki ezimbalwa ezinombono ophilileyo nezizathu zokuba ngumntu onemfundo esebenzisa iqhinta lezinto zokuzivocelwa. Ikhona kulo lwazi njengendlela elibonakalayo, enye indlela yokwazi

ukuba iyahlala — hayikona njengesenzo osenza ngokwakho. Unye umntu oza kuyilawula kufuneka kuze nalo umphathi wezanyani okanye u... iNkosikazi yophakazi wezempilo zokungaphilileyo ekhokelwe ngokukhawuleza, isiqalo esifanayo leso sinqabile kuyo yonke imfundisi yokungekho emva kwesixhobo.

Ngokwenkqumeni, oku yindlela efanayo yokungena njengombala we-oxytocin iqalo elibonakala kuloqoqo lwezinto ezizifushulwa kwika-Recovery Kernel malunga nokuhamba kwebenzodiazepine — indlela (ukugcwalisa i-HPA-axis) ifanayo, kwaye isiqalo esifanelekileyo siqhubekayo: yinto eqinileyo, efanele ukuzivulwa nengqikithi, hayikona ngoko ke yinto ekhona njalo.

Ibhizinisi lesi-10 — Ukubona Kwemva Kwecala, Lisibonakaliselwa

Ikhonza Lempilo

Yocela i-112 kwaye usebenzise iNaloxone ukuba ikhono kubo: ukuhlala kwemoya okuncinci, okuthileyo, okanye ekungaphakani — emibiqha okanye amadima ahlaziyayo — ukungabonakali — izwi elikhukuzayo okanye ukutshakalisa. Oku kubonakala ngokukhethekile ngemuva kwalo lonke ixesha lokuba kuphansi ukusetyenziswa okanye ukuhlala ngaphandle, ngenxa yomkhawulo wokungaqhubekanga osethwaleni 0, kunye nokutshintshwa kwe-fentanyl (Ibhiseke 6) njengophawu elinye, elingalindelekanga kuphi na umthwalo we-opioid osuka kwiindawo ezingaqhubekanga.

Ibhizinisi lesi-11 — Iqela Lokufumanisa Eliphelelelyo Lezixhobo Zokuhamba

Isiqalo	Into eyona iinikeza
Ibhuku lokulungisa iOpioids, Iboridi 3	Ilo ndlela esibanzi yomkhondo we-MAT ne-detox eyisishwankanywa yiBanga lesishumi emgano le ngcaciso.
Recovery Kernel Ibhuku lokugqibela iFentanyl	Iinkcukacha ezihlathwe ngokuba yinto ekhona kwisihloko sesixhobo seSixhobo 6 — iiphepha zokuhlola, ukufika kwe-Naloxone, kunye nezinye iziqalo zophakemba ze-fentanyl kumalinganiselo omphihlo wezinto ezithile.
Ibhizinisi leKukhangisa iingxoxo zeMihlaba, iMasonto, kunye neEentwana, Ikhontanga 5	Ikhuseleko lokugqibela elilxelelwe malunga nokungena kwemifanekiso kuMnye 6.
Ikhomenti Elithi Protokoli 14 (Ukunakekela Ubuhlungu)	Iindlela zokulawula ubuhlungu ezifanayo eziqikezelwe kwIsahluko 6 kubantu abasemva kokusebenzisa iopioids kuba isiqalo sabo sokusebenzisa iopioids sasifaku phakathi kwekuphuhliselwa kombala.
Ikhombenyelo leTiqalo ye-Protocol 05 (Ukuguqula iMeko)	Ikhontrakthi elingumkhulu kakhona le nto yokubuyela kwalo mntu—ukuba nengqondo yokuphazamisa okuguqulwa ngomoya (cue-triggered craving) luyindlela

Isiqalo	Into eyona iinikeza
	ephambili yokubuyela kwemvakalelo kumntwana weopioid, kunokuba kwinye imfundisi kwi sifundo esilethwe.
Ibhodi yeGene-Isandi eMkhawulweni, Appendix A	Ukuhamba kwesigaba seprotocol-code esiqondile emva kwezinto zokungqondo zeSection 5: GABRA2 + COMT Met/Met ('Ibhizinisi le-Anxiety') libandakanyeka ne-P06, P09, P10, P21; iGABRA2 ngokwayo libandakanyeka ne-P01, P06, P20; iGABRA2 + MTHFR ('Ibhizinisi le-Impulsive eliqhithile') libandakanyeka ne-P06, P07, P11, P21. Chaphazela le nkqubo yalo mqolo lo ngokuqondile ukuba kukhona ipanel elipheleleyo lye-genomic.
I-Buku Elikhulu le-Recovery Kernel, Ibhizini 8 (IProtokoli ye-Oxytocin)	Ikhaya elipheleleyo lesiqalo seSection 9 Sezibonakalayo —ingcaciso epheleleyo yendlela yokusebenza, kunye nezo miqondisi yoku sebenzisa imithombo ebyaziswe kulo mqondo.
Ikhombenyelo leTshukumiso 20, 21, C-28 (Ulwazi lweNqaku)	Kuyifanelekile ukuba kuqale phakathi kweMonths 1-6 (Ibhizinisi 2), akusona ngaphambili — ukwakha kabusha ubuhlobo obuhlukahlukene malunga neminye imbali yokuqala.
I-Kernel yokulungisa Ubuhlungu Bokungcoliswa Okukhulu kunye Nokubambela Kwemithi	Ukuphazamiseka kwezinto zokusebenzisa iopioidi ngokubanzi kuguqulwa kwizimo ezimbi kakhulu; umsebenzi okhona ngumthwalo kufuneka ungqalabeli kuphela xa kuqinisekwe ukuzinza komzimba ne-MAT — ixesha libalulekile apho kunye nendawo onye kulo mqondo.

Ibhizinisi lesi-12 — Ukuphetha

SANCTUARY

Ukubuyela emindlekweni yomphumela wemvulo luyinto yemidlalo yomntu wezindlawulo enye malunga nezinye izindawo zokuziphilisa eziqinileyo, ezisekelwe kwizibonakaliso ezisemthethweni zeziqhubekayo—iMAT ihlala impilo, ngexesha elingapheliyo, ngokumelekane. Ukuyisebenzisa akusiyo umbala omncinci wokubuyela emindlekweni. Isinemvulo nezixhobo zokuziphilisa eziyifakwe yimphumela wemvulo zingakwazi ukubuyeka, kwaye zingakwazi ukubuyeka, kwinda ndlela enye, ngokuqondile, nakuba le ndlela yokubuyela iquka umthetho wokutshangelwa okuhamba. Okubalulekile kakhulu, ngokweSection 0, kukuziphilisa phakathi kwesikhathi lapho ukungaqondi nokulindela kuphikisana —konke okusele kuloqozo kukhona ukuqinisekisa ukuba ukhomba ngaphaya kwalo mqondo.

ISIPHELO SESITHATHISI — IPROTOKOLI YOKUNQANDELA UKUSEBENZISA: OPIOIDS

Uqalo Lwezixhobo Zokulungisa Ubuhlungu — Akuyona Iseluleko SeZempilo — Akusiyo Isixhobo Seziqhubekayo Kweziqhubeko SeZiko